

# 510(K) SUMMARY OF SAFETY AND EFFECTIVENESS

# NITRILE CORNFLOWER BLUE POWDER-FREE EXAMINATION GLOVES TESTED FOR USE WITH CHEMOTHERAPY DRUGS

Applicant:

Cardinal Health, Inc. 1430 Waukegan Road

McGaw Park, IL 60085

Regulatory Affairs Contact: Tatyana Bogdan, RAC

Telephone:

847-887-2325

Date Summary Prepared: February 21, 2011

**Product Trade Name:** 

Nitrile Powder-Free Exam Gloves Tested for Use with

Chemotherapy Drugs

Common Name:

**Exam Gloves** 

Classification Name:

Patient Examination Gloves

**Device Description:** 

These patient examination gloves are formulated using Nitrile. They are a disposable device that is offered powder-free and nonsterile. Gloves are cornflower blue in color. Gloves are not made

with natural rubber latex.

#### **Intended Use:**

A powder-free patient examination glove is a disposable device intended for medical purposes that is worn on the examiner's hand or finger to prevent contamination between patient and examiner.

In addition, these gloves were tested for use with chemotherapy drugs in accordance with ASTM D6978-05 Standard Practice for Assessment of Medical Gloves to Permeation by Chemotherapy Drugs:

	Chemotherapy Drug and Concentration	Minimum Breakthrough Detection Time in Minutes, 0.01 µg/cm²/minute
1.	Carmustine (BCNU) (3.3 mg/ml)	0.61
2.	Cisplastin, (1.0mg/ml)	>240
3.	Cyclophosphamide (20 mg/ml)	>240
4.	Doxorubicin HCl (2.0 mg/ml)	>240
5.	Etoposide (Toposar) (20 mg/ml)	>240
6.	5-Fluorouracil (50 mg/ml)	>240
7.	Methotrexate (25 mg/ml)	>240
8.	Paclitaxel (Taxol) (6.0 mg/ml)	>240
9.	Thiotepa (10 mg/ml)	10.6

The maximum testing time is 240 minutes. Please note that the following drugs have extremely low permeation time of less than 30 minutes:

Carmustine (BCNU) (3.3 mg/ml) Thiotepa (10 mg/ml)

#### **Predicate Devices:**

Nitrile Blue Powder-Free Examination Gloves with Tested for Use with Chemotherapy Drug Labeling Claim previously cleared under 510(k) K022765 (product code LZA);

## Substantial Equivalence:

The gloves are substantially equivalent to the predicate device identified in this 510(k) summary. Substantial equivalence can be established in regard to intended use, physical characteristics, design and product features. Both gloves are made with Nitrile using similar manufacturing processes. In addition, both gloves have been tested for use with chemotherapy drugs.

### Performance Testing:

Test: Result:

Primary Skin Irritation Gloves are non-irritating.

Guinea Pig Maximization Gloves do not display any potential for sensitization.

Cardinal Health, Inc.

Premarket Notification Submission - Traditional 510(k)

page 3 of 3

Dimensions Gloves meet requirements of ASTM D6319.

Physical Characteristics

**ASTM** 

Gloves meet requirements for Nitrile examination gloves per

D6319.

Freedom from Holes Gloves meet requirements of 21 CFR 800,20 and ASTM D6319

Powder Residual Gloves meet powder level requirements for "Powder-Free"

designation per ASTM D6319 tested using ASTM standard D6124, Standard test method for residual powder on medical gloves. Results generated values below 2mg of residual powder

per glove.

Chemotherapy Permeation Gloves were tested using ASTM D6978, Standard Practice for

Assessment of Resistance of Medical Gloves to Permeation by Chemotherapy Drugs. The maximum testing time is 240 minutes.

#### Clinical Data:

No clinical data is required.

#### Conclusion:

The gloves meet the technological characteristics of ASTM D6319 performance standard and are substantially equivalent to the predicate device identified in this 510(k) summary.







Food and Drug Administration 10903 New Hampshire Avenue Document Control Room –WO66-G609 Silver Spring, MD 20993-0002

Cardinal Health, Incorporated C/O Mr. Ned Devine Responsible Third Party Official Underwriters Laboratories, Incorporated 333 Pfingsten Road Northbrook, Illinois 60062

APR 1 5 2011

Re: K110921

Trade/Device Name: Nitrile Cornflower Blue Powder-Free Exam Tested for Use with

Chemotherapy Drugs (Non-Sterile)

Regulation Number: 21 CFR 880.6250

Regulation Name: Patient Examination Glove

Regulatory Class: I Product Code: LZA Dated: March 30, 2011 Received: April 1, 2011

## Dear Mr. Devine:

We have reviewed your Section 510(k) premarket notification of intent to market the device referenced above and have determined the device is substantially equivalent (for the indications for use stated in the enclosure) to legally marketed predicate devices marketed in interstate commerce prior to May 28, 1976, the enactment date of the Medical Device Amendments, or to devices that have been reclassified in accordance with the provisions of the Federal Food, Drug, and Cosmetic Act (Act) that do not require approval of a premarket approval application (PMA). You may, therefore, market the device, subject to the general controls provisions of the Act. The general controls provisions of the Act include requirements for annual registration, listing of devices, good manufacturing practice, labeling, and prohibitions against misbranding and adulteration. Please note: CDRH does not evaluate information related to contract liability warranties. We remind you, however, that device labeling must be truthful and not misleading.

If your device is classified (see above) into either class II (Special Controls) or class III (PMA), it may be subject to additional controls. Existing major regulations affecting your device can be found in the Code of Federal Regulations, Title 21, Parts 800 to 898. In addition, FDA may publish further announcements concerning your device in the Federal Register.

Please be advised that FDA's issuance of a substantial equivalence determination does not mean that FDA has made a determination that your device complies with other requirements of the Act or any Federal statutes and regulations administered by other Federal agencies. You must comply with all the Act's requirements, including, but not limited to: registration and listing (21 CFR Part 807); labeling (21 CFR Part 801); medical device reporting (reporting of medical device-related adverse events) (21 CFR 803); good manufacturing practice requirements as set forth in the quality systems (QS) regulation (21 CFR Part 820); and if applicable, the electronic product radiation control provisions (Sections 531-542 of the Act); 21 CFR 1000-1050.

If you desire specific advice for your device on our labeling regulation (21 CFR Part 801), please go to <a href="http://www.fda.gov/AboutFDA/CentersOffices/CDRH/CDRHOffices/">http://www.fda.gov/AboutFDA/CentersOffices/CDRH/CDRHOffices/</a> ucm115809.htm for the Center for Devices and Radiological Health's (CDRH's) Office of Compliance. Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21CFR Part 807.97). For questions regarding the reporting of adverse events under the MDR regulation (21 CFR Part 803), please go to <a href="http://www.fda.gov/MedicalDevices/Safety/ReportaProblem/default.htm">http://www.fda.gov/MedicalDevices/Safety/ReportaProblem/default.htm</a> for the CDRH's Office of Surveillance and Biometrics/Division of Postmarket Surveillance.

You may obtain other general information on your responsibilities under the Act from the Division of Small Manufacturers, International and Consumer Assistance at its toll-free number (800) 638-2041 or (301) 796-7100 or at its Internet address <a href="http://www.fda.gov/MedicalDevices/ResourcesforYou/Industry/default.htm">http://www.fda.gov/MedicalDevices/ResourcesforYou/Industry/default.htm</a>.

Sincerely yours,

Anthony D. Watson, B.S., M.S., M.B.A.

Director

Division of Anesthesiology, General Hospital, Infection Control and Dental Devices Office of Device Evaluation Center for Devices and Radiological Health

# Indications for Use

510(k) Number (if known): K110921

Device Name:

Nitrile Cornflower Blue Powder-Free Exam Gloves Tested for Use with

Chemotherapy Drugs (Non-sterile)

Indications for Use: A powder-free patient examination glove is a disposable device intended for medical purposes that is worn on the examiner's hand or finger to prevent contamination between patient and examiner.

In addition, these gloves were tested for use with chemotherapy drugs in accordance with ASTM D6978-05 Standard Practice for Assessment of Medical Gloves to Permeation by Chemotherapy Drugs:

	Chemotherapy Drug and Concentration	Minimum Breakthrough Detection Time in Minutes, 0.01 µg/cm²/minute
1.	Carmustine (BCNU) (3.3 mg/ml)	0.61
2.	Cisplastin, (1.0mg/ml)	>240
3.	Cyclophosphamide (20 mg/ml)	>240
4.	Doxorubicin HCl (2.0 mg/ml)	>240
5.	Etoposide (Toposar) (20 mg/ml)	>240
6.	5-Fluorouracil (50 mg/ml)	>240
7	Methotrexate (25 mg/ml)	>240
8.	Paclitaxel (Taxol) (6.0 mg/ml)	>240
9.	Thiotepa (10 mg/ml)	10.6

The maximum testing time is 240 minutes. Please note that the following drugs have extremely low permeation time of less than 30 minutes:

Carmustine (BCNU) (3.3 mg/ml) Thiotepa (10 mg/ml)

Prescription Use (Part 21 CFR 801 Subpart D)

AND/OR

Over-The-Counter Use X\_\_\_\_\_(21 CFR 801 Subpart C)

(PLEASE DO NOT WRITE BELOW THIS LINE-CONTINUE ON ANOTHER PAGE IF NEEDED)

Concurrence of CDRH, Office of Device Evaluation (ODE)

Sign-Off)

Cardinal Health, Inc.

Premarket Notification Submission – Traditional 510(k)

Division of Anesthesiology, General Hospital

infection Control, Dental Devices

510(k) Number: K110921

5